

Application No.: 10/792,177
Inventor: HERNDON, Troy M.
Reply to Office Action of February 12, 2007
Docket No.: STL 3352

Amendments to the Specification:

1.) Please replace the current title of the invention, with the following amended title of the invention:

~~MULTI-JOURNAL BEARING SYSTEM~~

METHOD OF CONFIGURING A FLUID DYNAMIC BEARING SYSTEM

2.) Please replace paragraph [0019] with the following amended paragraph:

[0019] In addition to thrust bearing 290, Figure 2 shows that there are three sets of grooves ~~grooves~~ disposed on an outer surface of the shaft 255 along a shaft-sleeve interface 292. The grooved portions of the shaft along with the corresponding outer sections of the sleeve 250 comprise top 275, intermediate 280, and bottom 285 journal bearings, respectively. Upon rotation of the sleeve 250, the grooved patterns of each of the journal bearings 275, 280, 285 create a high pressure region at the center of each pattern to retain fluid and provide stiffness to the motor 200. Although, only one intermediate journal 285 is depicted in Figure 2, any number of intermediate journals 285 may be provided, depending upon design considerations of a particular motor.

3.) Please replace paragraph [0020] with the following amended paragraph:

[0020] The substantially chevron-shaped groove patterns of the journals 275, 280, and 285 shown in Figure 2 are preferred but other patterns, such as spiral patterns, would suffice. Preferably, the groove patterns are disposed on the shaft 255, however, they may also be disposed on an inner surface of the sleeve 250. It can be seen that the groove patterns are each identical to one another and spaced equidistantly along the shaft 255. This is only a preferred embodiment, however. In alternative embodiments, the journal bearings 275, 280, and 285 may each comprise a different number and configuration of grooves and may be unequally spaced

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along the gap 292. Further, the groove ~~grove~~ patterns may overlap one another as long as they are substantially separate, i.e., as long as the apex(es) of each groove pattern is/are longitudinally spaced apart.